

Claims

1. Method for generating an information item in and/or on a support body, in which, for a number of starting materials contained in and/or on the support body, those reaction conditions which cause the starting materials to enter into a synthesis reaction are set in a localized partial area of the support body by means of laser irradiation.
2. Method according to Claim 1, in which the synthesis reaction employed is an addition, an elimination, a substitution, a redox reaction or a complexing reaction.
3. Method according to Claim 1 or 2, in which inorganic substance mixtures are used as the starting materials of the synthesis reaction.
4. Method according to any of the preceding claims, in which the starting materials are selected in such a way that they are caused to enter into a synthesis reaction resulting in a change in colour.
5. Method according to any of the preceding claims, in which the starting materials are selected in such a way that the product of the respective synthesis reaction is in each case assigned to a basic colour of a CMYK colour scale.
6. Method according to any of the preceding claims, in which starting materials of synthesis reactions resulting in different property changes, in particular colour changes, are contained in the support body in separate volume segments (18a-d).
7. Method according to any of the preceding claims, in which starting materials of synthesis reactions resulting in different property changes, in particular colour

changes, are contained in the support body in separate layers (16a-d).

8. Method according to any of the preceding claims, in which at least one of the starting materials is contained in an encapsulated manner, wherein the encapsulation is selected in such a way that it is broken open by the laser radiation.

9. Method according to Claim 8, in which the encapsulation is selected in such a way that it absorbs the laser radiation.

10. Method according to any of the preceding claims, in which auxiliary agents or layers which absorb the laser radiation are embedded in the support body.

11. Method according to any of the preceding claims, in which particles which act as a catalyst for the synthesis reaction are embedded in the support body.

12. Method according to any of the preceding claims, in which a laser with emissions from the UV to IR range is used for the laser irradiation.

13. Method according to any of the preceding claims, in which an Nd:YAG laser with an emission wavelength of 1064 nm is used for the laser irradiation.

14. Method according to any of the preceding claims, in which substances which do not absorb the laser radiation, such as paper, plastic films and/or a layer of colour, adhesive and/or varnish, are provided as basic components of the support body, these substances being inscribed or marked so as to mark documents in a forgery-proof manner or to verify documents by machine and at the same time make them invalid.

15. Method according to any of the preceding claims, in which the starting materials contained in and/or on the support body are introduced as an additional additive during manufacture of the film or paper and/or are applied in and/or on the support body by means of coating methods, such as painting, misting, spraying, coating or dipping, and/or by means of printing methods, such as offset printing, die stamping, photogravure, flexographic printing, screen printing, indirect letterpress printing, heat transfer printing, electrophotography and inkjet methods.
16. Support body, in particular for the method according to any of Claims 1 to 15, in and/or on which a number of starting materials are contained in such a way that the reaction conditions for a synthesis reaction of the starting materials can be set in a laser-induced manner.
17. Support body according to Claim 16, in which substances which do not absorb the laser radiation, such as paper, plastic films and/or a layer of colour, adhesive and/or varnish, are provided as basic components of the support body.
18. Support body according to Claim 16 or 17, in which inorganic substance mixtures are used as the starting materials of the synthesis reaction.
19. Support body according to any of Claims 16 to 18, in which the starting materials are selected in such a way that the product of the respective synthesis reaction is in each case assigned to a basic colour of a CMYK colour scale.
20. Support body according to Claim 19, in which $MnSO_4$, KNO_3 and KOH are contained as the starting materials for a product assigned to the colour blue ("Cyan").

21. Support body according to Claim 19 or 20, in which $\text{Fe}_2(\text{SO}_4)_3$ and KSCN are contained as the starting materials for a product assigned to the colour red ("Magenta").
22. Support body according to any of Claims 19 to 21, in which Cr_2O_3 , KNO_3 and KOH are contained as the starting materials for a product assigned to the colour yellow ("Yellow").
23. Support body according to any of Claims 19 to 22, in which Cu^{2+} and NH_3 or the substances $\text{Co}(\text{NO}_3)_2$ and Al_2O_3 are contained as the starting materials for a product assigned to the colour blue and/or $\text{Co}(\text{NO}_3)_2$ and ZnO or the substances K_2CrO_4 and $\text{C}_3\text{H}_7\text{OH}$ are contained as the starting materials for a product assigned to the colour green.
24. Support body according to any of Claims 16 to 23, in which starting materials of synthesis reactions resulting in different property changes, in particular colour changes, are contained [lacuna] support body in separate volume segments (18a-d).
25. Support body according to any of Claims 16 to 24, in which starting materials of synthesis reactions resulting in different property changes, in particular colour changes, are contained in the support body in separate layers (16a-d).
26. Support body according to any of Claims 16 to 25, in which auxiliary agents or layers which absorb the laser radiation are embedded.
27. Support body according to Claim 26, in which, assigned to Key or black, a mica or colour pigment is contained as an auxiliary agent which absorbs the laser radiation.

28. Support body according to any of Claims 16 to 27, in which at least one of the starting materials of a synthesis reaction is contained in an encapsulated manner, wherein the encapsulation is selected in such a way that it is broken open by the laser radiation.
29. Support body according to Claim 28, in which the encapsulation is selected in such a way that it absorbs the laser radiation.
30. Support body according to any of Claims 16 to 29, in which particles which act as a catalyst for the synthesis reaction are embedded.
31. Use of a support body according to any of Claims 16 to 30 as a document of value and/or security document, such as an identification card, driving licence, credit card, health insurance card, or as a ticket or foil, etc.